Algebraic Expressions

Unit 1

|  |  |  |  |
| --- | --- | --- | --- |
| Day | Section | Topic | Assignment |
| 1 | 1.1 | The Real Numbers | **Pg 12:** 1-14 all **(Done)**  **Repeating decimals Wksht** |
| 2 | 1.1 | Properties of Real NumbersOrder of Operations | **Pg 14:** 51-66,85-88 all **(Done)**  **Pg 12-13:** 15-42 all **(Done)**  **Properties Worksheet**  **pg 23:** 1-26 |
| 3 | 1.2 | Order and Absolute Value | **Pg 23-24:** 29-48, 60-64 |
| 4 | 1.6 | Exponents | **Pg 33:** 1-12 all **(Done)**  **Pg 36:** 95-98  **Pg 61:** 29-52  **Pg 63-64:** 97-100 |
| 5 |  | More Exponents | Exponents Worksheet  Some Interesting Probs. Wksht |
| 6 |  | Review | Worksheet |
| 7 |  | Test Unit 1 |  |

**STUDENTS: You will not be able to check your packet answers until I return the packet to you (obviously).**

**DAY 1: Pg 12:** 1-14 all **(Done in packet) –**

1. *A,B,C,D,F* 2. *B,C,D,F* 3. *D,F* 4. *A,B,C,D,F* 5. *E,F* 6. D, F

7. *A rational number CAN be written as a fraction; an irrational numbers CANNOT be written as a fraction.*

8. *These values are ESTIMATES for π not actually π.*

*Any fraction, terminating or repeating decimal that does not reduce to an integer*

9. 10. *Any negative integer*

11. *1, 3* 12. *0, 1, 3*

13.  14. 

**Repeating decimals Wksht – will check answers in class**

**DAY 2: Pg 14:** 51-66,85-88 all **(Done)**, **Pg 12-13:** 15-42 all **(Done)**, **Properties Worksheet**, **pg 23:** 1-26

D) Exercises: page 14 #51 **−** 66

For #63 **−** 66 Show work (distribution and reducing of fractions) --- DO NOT use a calculator.

51. *Distributive (x over +)* 52. *Commutative Multiplication*

53. *Inverse Multiplication* 54. *Inverse Multiplication*

55. *Identity Addition* 56. *Closure Additon*

57. *No 2 – 4 = –2 but 4 – 2 = 2*

58. *No (4 – 2) – 1 = 1 but 4 – (2 – 1) = 3*

59. *p(8 – 14) = –6p* 60. *x(15 – 10) = 5x*

61. *–3z + 3y* 62. *–2m – 2n*

 63. ** 64. **

**

65. 66.

*Always reduce before multiplying –*

*Use cancellation*

Exercises: page 16 #85 **−** 88 (Rewrite the problem to indicate the mental math you are doing.)

85. *(72 + 28)17 = (100)(17) = 1700* 86. *32(80 + 20) = 32(100) = 3200*

**

 87. 88.

B) Exercises: page 12 #15 **−** 42 Show **ALL** work

For problems #15-21 show the factors you are multiplying and the solution

15. 3 x 3 x 3 x 3 = 81 16. −(3 x 3 x 3 x 3 x 3) = −243

17. −(2 x 2 x 2 x 2 x 2 x 2) = −64 18. (−3) x (−3) x (−3) x (−3) = 81

19. (−2) x (−2) x (−2) x (−2) x (−2) = −32 20. (−3) x (−3) x (−3) x (−3) x (−3) = − 243

21. (−3) x (−3) x (−3) x (−3) x (−3) x (−3) = 729 22. negative …. positive

23. −52 = −(5 x 5) = −25 24. − (−5)3 − (−5)2 =

(−5)2 = (−5) x (−5) = 25 − [(−5) x (−5) x (−5)] − [(−5) x (−5)]

− (−5)2 = − [(−5) x (−5)] = −(25) = −25 −(−125) − 25 = 100

B) Exercises: page 12 #15 **−** 42 Show **ALL** work *(Continued)*

For problems 25-42 copy the problem and show all steps

All problems should be completed WITHOUT a calculator

Fraction work should be shown (LCD, Reducing) --- DO NOT use a calculator.

25. 82 − (−4) + 11 26. 16(−9) − 4 27. −2 ⋅ 5 + 12 ÷ 3

64 + 4 + 11 −144 − 4 = −148 −10 + 12 ÷ 3

68 + 11 = 79 −10 + 4 = = −6

28. 9 ⋅ 3 − 16 ÷ 4 29. −4(9 − 8) + (−7)(2)3 30. 6(−5) − (−3)(2)4

27 − 16 ÷ 4 −4(1) + (−7)(2)3 −30 − (−3)(2)4

27 − 4 = 23 −4(1) + (−7)(8) −30 − (−3)(16)

−4(1) + (−56) = −60 −30 − (−48) = −30 + 48 = 18

31. (4 − 23) (−2 + ) 32.  33. 

(4 − 8) (−2 + 5) [−9 −(− 2)] [4 − 8]

(−4) (3) = −12 (−9 + 2) (−4)  

(−7)(−4) = 28



34. 









35.  36. 

 

 



37. 2(q − r) 38.  39. 

2(8 − (−10))





2(8 + 10)

2(18) = 36

40.  41.  42. 









**Properties Worksheet**

**Side 1 – page 51 at bottom of sheet**

**1) C 2) B 3) G 4) D 5) I 6) G 7) C 8) I 9) A 10) B 11) E 12) F 13) G 14) B 15) K 16) G 17) D 18) K 19) G 20) D 21) B 22) J**

**Side 2 – page 52 at bottom of sheet**

**1) I 2) G 3) C 4) K 5) B 6) K 7) G 8) E 9) D 10) A 11) J 12) I 13) B 14) C 15) B 16) G 17) F 18) D 19) K 20) I 21) G 22) E**

**pg 23:** 1-26 Keep in mind that you should NOT NEED A CALCULATOR!

**1) 0; 2) 0; 3) 1; 4) 1; 5) True**

**6) 7) -5, -4, -2,**

**8)**

**9) 10) 11) FALSE**

**12) In the second statement, a number cannot be both greater than 5 and less than 2.**

**13) -5 < y 14) < 15) -6 < 15 16) -14 < 2 17) 18)**

**19) 8 20) 6 21) 6 22) 2 23) 4 24) 14 25) 5 26) 8**

**27) 24 28)**

**DAY 3 - Pg 23-24:** 29-48, 60-64

**29) 30) 31) 3 - y 32) x - 4 33) 8 – 2k 34) 3r – 15**

**35) y - x 36) x – y 37) 38)**

**39) Addition Prop. of Order 40) Mult. Prop. of Order**

**41) Transitive Prop. of Order 42) Mult. Prop. of Order**

**43) Addition Prop. of Order 44) Triangle Inequality**

**45) Triangle Inequality 46) Prop. of Absolute Value**

**47) Prop. of Absolute Value,**

**48) Prop. of Absolute Value,**

|  |  |  |
| --- | --- | --- |
| **60)**  **OR** | **61)** | **62)**  **OR** |
| **63)** | **64)**  **OR** | |

**DAY 4: Pg 36:** 95-98, **Pg 61:** 29-52, **Pg 63-64:** 97-100

**Pg 36:** 95-98

95) 1,000,000 96) 144 97) 32 98) 81

**Pg 61:** 29-52

**29) 1 30)  31)  32) **

**33)**  **34)**  **35)  36) **

**37)**  **38)  39)  40) **

**41)**  **42)  43)  44) **

**45)**  **46)  47)  48) **

**49)**  **50)  51)  52) **

**Pg 63-64:** 97-100

**97)**  **98) **

**99) by a factor of 27 100) by a factor of 4**

**DAY 5: Exponents Worksheet, Some Interesting Probs. Wksht**

**Exponent Worksheet (1)**

**PART A**

**1)**  **2)  3)  4) **

**5)**  **6)  7) **

**PART B**

**1)**  **2)  3)  4) **

**5)**  **6)  7) **

**PART C**

**1)**  **2)  3)  4)  5)** 

**PART D**

**1)**  **2)  3)  4)  5)** 

**Exponent Worksheet (2)**

**1)**  **2)  3)  4)  5)** **6)  7)  8)  9) **

**10)  11)  12) **

**Some Interesting Probs. Wksht**

**1)** in class **2)  3)  4)  5)**  **6)  7)** 

**DAY 6:** Unit 1 Review Worksheet

**1)** Q, R **2) W, I, Q, R 3) I, Q, R 4) Ir, R**

**5) Commutative Property of Addition**  **6) Multiplicative Inverse**

**7) Additive Identity 8) Closure of Addition**

**9) Property of Absolute Values 10) Distributive Property**

**11) Commutative Property of Multiplication 12) Additive Inverse**

**13) Associative Property of Addition**

**14) -1 15)  16) -6 17) -7 18)  19) **

**20)  21)  22)  23)  24) **

**25)  26)  27)  28) **